

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of acquisition of satellite data by a mobile device including a radio navigation satellite system (RNSS) receiver, said method comprising:

~~[[-]]said receiver receiving a signal transmitted by a plurality of satellites and corresponding to a sum of signals each transmitted by a satellite and each modulated by a spread spectrum signal characteristic of said satellite[[,]];~~

~~[[-]]said receiver generating a plurality of local duplicates each of which is the duplicate of a spread spectrum signal characteristic of a satellite[[,]];~~

~~[[-]]correcting a frequency of each of said local duplicates by compensating a Doppler effect of each of said satellites using assistance data sent by an assistance server to said mobile device, and applying a first correlation function to each of the corrected duplicates;~~

~~[[-]]summing the corrected duplicates to which the first correlation function is applied to generate a sum of the corrected duplicates; and~~

~~[[-]]determining a second correlation function as a function of time between the sum of the corrected duplicates and said satellite data signal.~~

2. (currently amended): A method according to claim 1, including identifying each of the satellites associated with each of correlation peaks revealed by said ~~second~~ correlation function.

3. (currently amended): A method according to claim 2, wherein in the identifying the each of the satellites, identifying at least one of the satellites comprises:

~~[[-]]identifying a synchronization time associated with a correlation peak[[,]];~~

~~[[-]]determining a plurality of correlations calculated for said synchronization time between each of the sum of the corrected duplicates and said satellite data signal[[,]]; and~~

[[-]]identifying the at least one of the satellites associated with said correlation peak as a function of said correlations.

4. (currently amended): A method according to claim 3, wherein said peak is a highest peak among the correlation peaks of said ~~second~~-correlation function as a function of time, and the highest peak is first identified among the correlation peaks.

5. (previously presented): A method according to claim 3, wherein, after the at least one satellite has been identified, each remaining satellite is identified, using assistance data sent to said mobile device from an assistance server, said assistance data including ephemerides of said plurality of satellites and an identifier of a cell in which said mobile device is located, by determining a propagation time difference of a signal between the at least one satellite already identified and said mobile terminal, on the one hand, and each of the remaining satellites to be identified and said mobile device, on the other hand.

6. (currently amended): A method according to claim 2, wherein the identifying each of the satellites comprises:

[[-]]identifying a synchronization time associated with a correlation peak[[,]];

[[-]]determining a plurality of correlations calculated for said synchronization time between each of the sum of the corrected duplicates and said satellite data signal[[,]]; and

[[-]]identifying a satellite associated with said correlation peak as a function of said correlations.

7. (currently amended): A method according to claim 1, wherein ~~the first correlation function corresponds to a Fourier transform, and the second correlation function corresponds to an inverse Fourier transform~~ said correlation function as a function of time is determined by operations of:

determining a Fourier transform of each of said corrected duplicates;

summing the Fourier transform of each of said corrected duplicates;

determining a Fourier transform of said satellite signal;
multiplying the sum of the Fourier transform of the each of said corrected duplicates by
the Fourier transform of said satellite signal; and
determining an inverse Fourier transform of a result of the multiplying.

8. (currently amended): A radio navigation satellite system (RNSS) receiver for implementing the method according to claim 1, said receiver being adapted to receive a signal transmitted by a plurality of satellites and corresponding to a sum of signals each transmitted by a satellite and each modulated by a spread spectrum signal characteristic of said satellite, and said receiver comprising:

[[-]] means for generating a plurality of local duplicates each of which is the duplicate of a spread spectrum signal characteristic of a satellite[[,]];

[[-]] means for correcting a frequency of each of said local duplicates by compensating a Doppler effect of each of said satellites using assistance data sent by an assistance server to said receiver, ~~and applying a first correlation function to each of the corrected duplicates;~~

[[-]] an adder adapted to sum the corrected duplicates ~~to which the first correlation function is applied to generate a sum of the corrected duplicates;~~ and

[[-]] means for calculating a ~~second~~ correlation function as a function of time between the sum of the corrected duplicates and said satellite data signal.

9. (previously presented): A mobile device incorporating a radio navigation satellite system (RNSS) receiver according to claim 8.